

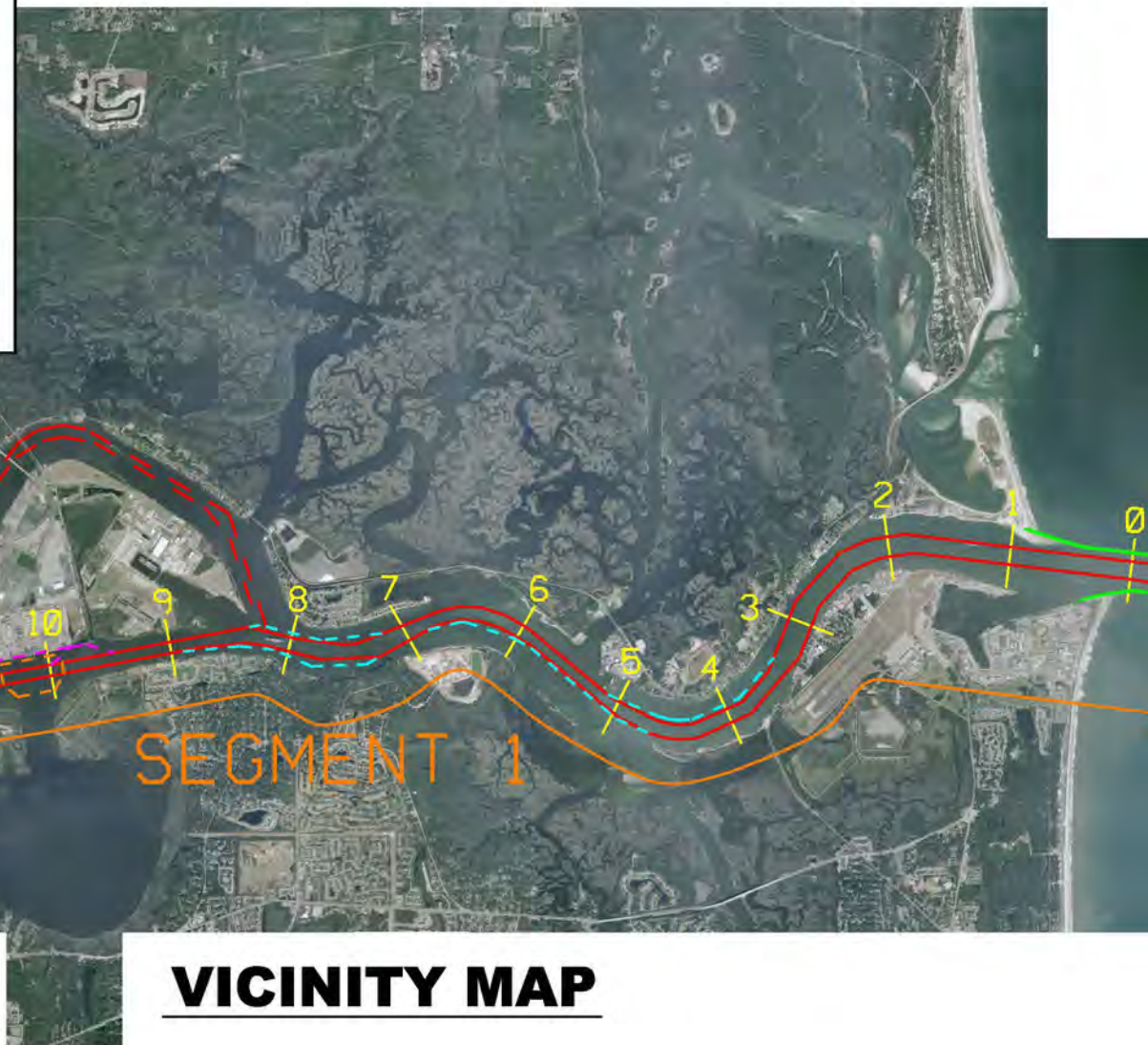
APPENDIX A

ENGINEERING APPENDIX

PLATES 1 TO 10

Jacksonville Harbor Navigation Study, Duval County,
Florida

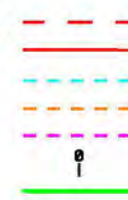
DRAFT
INTEGRATED GENERAL REEVALUATION
REPORT II AND SUPPLEMENTAL
ENVIRONMENTAL IMPACT STATEMENT



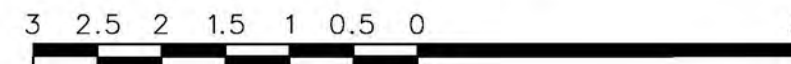
VICINITY MAP

LEGEND:

- EXISTING NAVIGATION PROJECT (OUTSIDE OF SEGMENT 1)
- EXISTING NAVIGATION PROJECT (IN SEGMENT 1)
- NAVIGATION PROJECT EXPANSION (CHANNEL WIDENING)
- NAVIGATION PROJECT EXPANSION (TURNING BASINS)
- LOCAL SPONSOR BERTHING AREAS
- RIVER MILES
- ENTRANCE CHANNEL JETTIES



GRAPHIC SCALE: MILES



SURVEY NOTES:

1. REFER TO SURVEY NO. 09-028.
2. ELEVATIONS ARE IN FEET AND TENTHS AND REFER TO NOAA'S REPORTED MEAN LOWER LOW WATER (MLLW) OF THE 1983-2001 TIDAL EPOCH.
3. ALL ELEVATIONS ARE BELOW THE CHART DATUM UNLESS PRECEDED BY A (+) SIGN.
4. TIDAL REDUCTIONS WERE OBTAINED USING RTK WITH THE FOLLOWING REFERENCE BASE LOCATIONS: 'STARKE', 'ST JO 302', AND '8720242A'.
5. PLANE COORDINATES ARE BASED ON THE TRANSVERSE MERCATOR PROJECTION FOR THE EAST ZONE OF FLORIDA AND REFERENCED TO NORTH AMERICAN DATUM OF 1983 (NAD83).
6. SURVEY WAS PERFORMED USING RTK GPS FOR POSITIONING. VERTICAL MEASUREMENTS WERE MADE USING A ROSS SMARTSOUNDER DEPTH RECORDER WITH A DUAL FREQUENCY 28/200KHZ SINGLE BEAM TRANSDUCER.
7. AIDS TO NAVIGATION WERE NOT LOCATED DURING THIS SURVEY.
8. THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED ABOVE AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS AT THAT TIME. THIS CHART IS SOLELY FOR THE DISTRIBUTION OF AVAILABLE DEPTHS AT THE TIME OF THE SURVEY AND IS NOT TO BE USED FOR NAVIGATION.
9. SURVEY ACCURACY PERFORMANCE STANDARDS, QUALITY CONTROL, AND QUALITY ASSURANCE REQUIREMENTS WERE FOLLOWED DURING THIS SURVEY IN ACCORDANCE WITH USACE EM 1110-2-1003, HYDROGRAPHIC SURVEYING, 1 JAN 02.

VESSEL

SB-32

DATE OF SURVEY

27 APR - 8 JUN 2009

CUT

BAR CUT-3 THRU CUT-45



DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

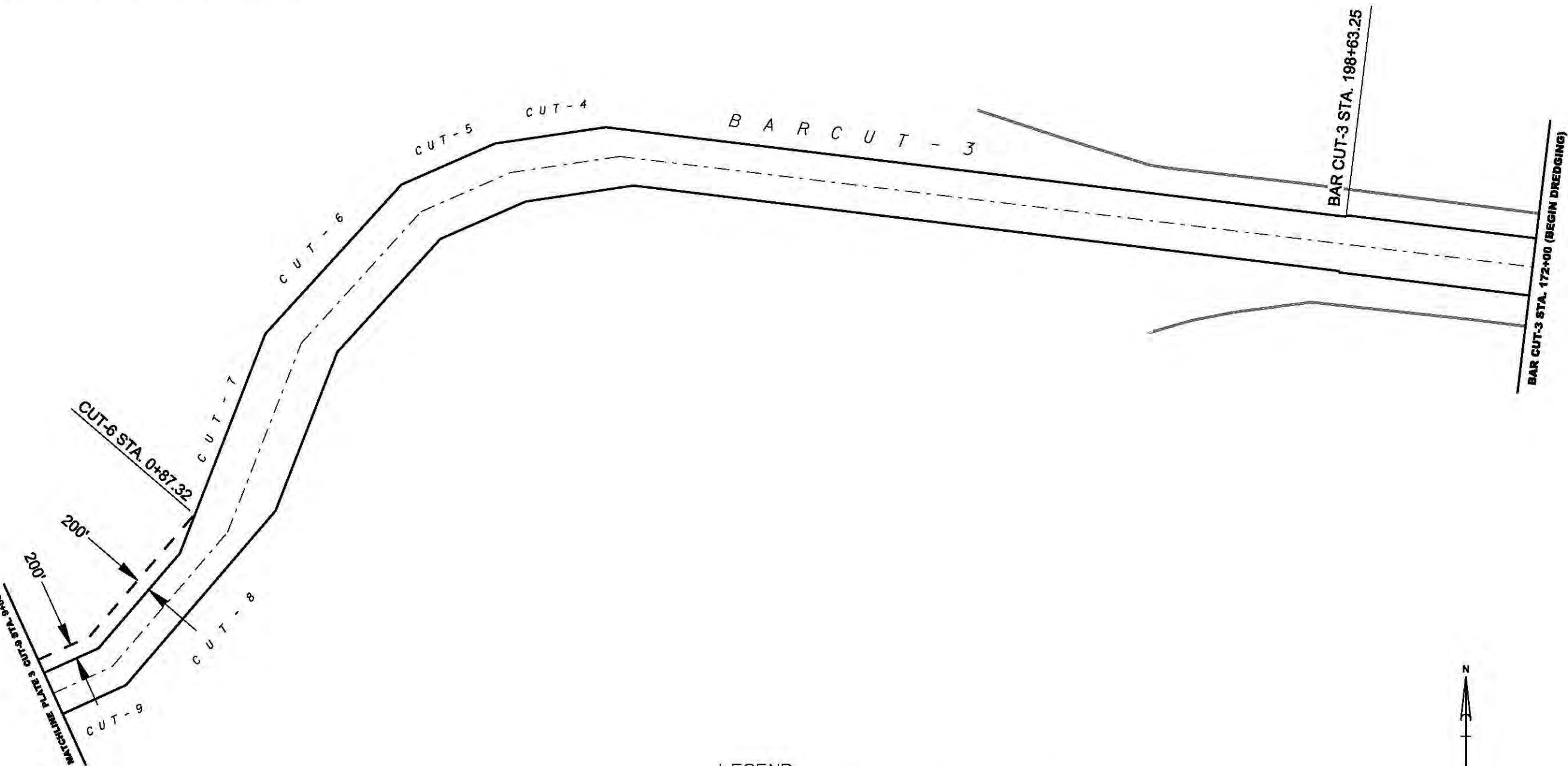
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Reference files: SRC
Designed by: SRC
Drawn by: LRP
Scale: As Shown
Plot date: MARCH 2013
Plot scale:

JACKSONVILLE HARBOR NAVIGATION PROJECT
DUVAL COUNTY, FLORIDA
PROJECT LOCATION AND VICINITY MAPS
GENERAL REEVALUATION REPORT II - ENGINEERING APPENDIX


PLATE
1

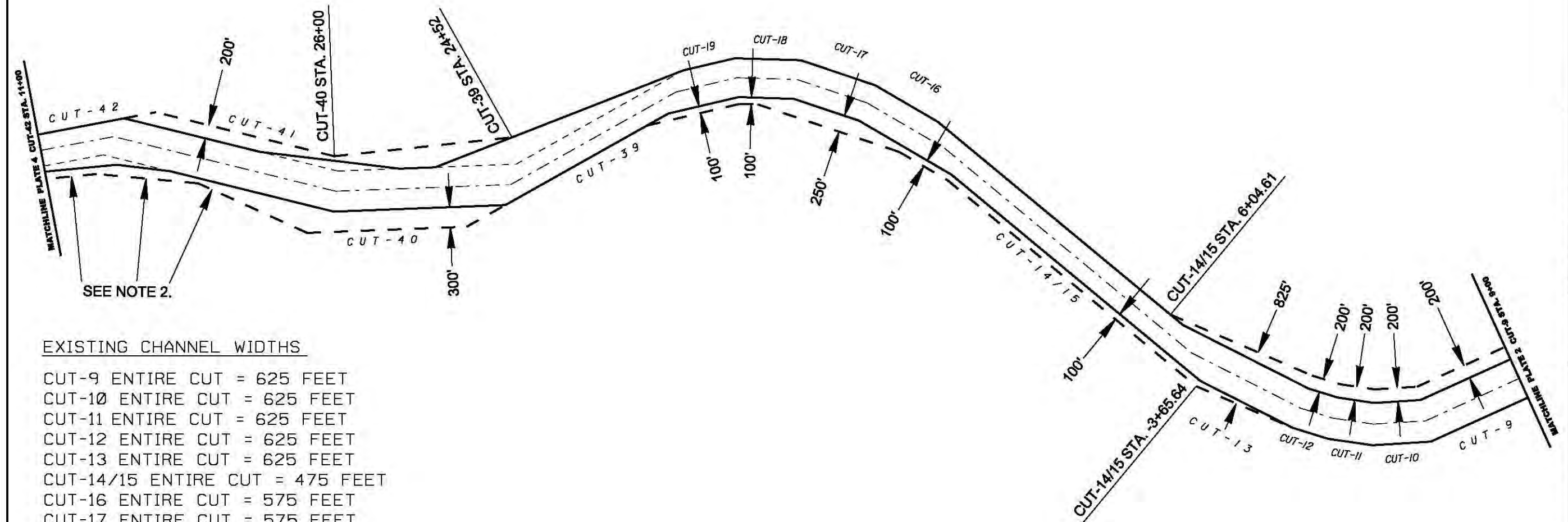
EXISTING CHANNEL WIDTHS

BAR CUT-3 STATION 0+00 TO STATION 198+63.25 = 800 FEET
BAR CUT-3 STATION 198+63.25 TO STATION 300+00 (END) = 760 FEET
CUT-4 ENTIRE CUT = 860 FEET
CUT-5 ENTIRE CUT = 910 FEET
CUT-6 ENTIRE CUT = 910 FEET
CUT-7 ENTIRE CUT = 1025 FEET
CUT-8 ENTIRE CUT = 625 FEET
CUT-9 ENTIRE CUT = 625 FEET



LEGEND:
EXISTING NAVIGATION PROJECT ———
NAVIGATION PROJECT EXPANSION - - -
ENTRANCE CHANNEL JETTIES ———
NOTE: STATION AND RANGE VALUES ARE RELATIVE TO THE EXISTING PROJECT CONTROL.

 US Army Corps of Engineers Jacksonville District	
DEPARTMENT OF THE ARMY JACKSONVILLE DISTRICT, CORPS OF ENGINEERS JACKSONVILLE, FLORIDA	
File name: Reference files:	Designed by: SRC Dwn by: SRC Scale As Shown Plot date: Plot scale: Dated: MARCH 2013
JACKSONVILLE HARBOR NAVIGATION PROJECT DUVAL COUNTY, FLORIDA EXISTING PROJECT AND PROPOSED EXPANSION DETAILS (BAR CUT-3 STA. 172+00 TO CUT-9 STA. 9+00) GENERAL REEVALUATION REPORT II - ENGINEERING APPENDIX	
PLATE 2	



EXISTING CHANNEL WIDTHS

CUT-9 ENTIRE CUT = 625 FEET
 CUT-10 ENTIRE CUT = 625 FEET
 CUT-11 ENTIRE CUT = 625 FEET
 CUT-12 ENTIRE CUT = 625 FEET
 CUT-13 ENTIRE CUT = 625 FEET
 CUT-14/15 ENTIRE CUT = 475 FEET
 CUT-16 ENTIRE CUT = 575 FEET
 CUT-17 ENTIRE CUT = 575 FEET
 CUT-18 ENTIRE CUT = 575 FEET
 CUT-19 ENTIRE CUT = 575 FEET
 CUT-39 ENTIRE CUT = 450 FEET, PLUS NORTH WIDENER
 CUT-40 ENTIRE CUT = 600 FEET, PLUS NORTH WIDENERS
 CUT-41 ENTIRE CUT = 600 FEET, PLUS NORTH AND SOUTH WIDENER
 CUT-42 ENTIRE CUT = 475 FEET, PLUS SOUTH WIDENER

NOTE:

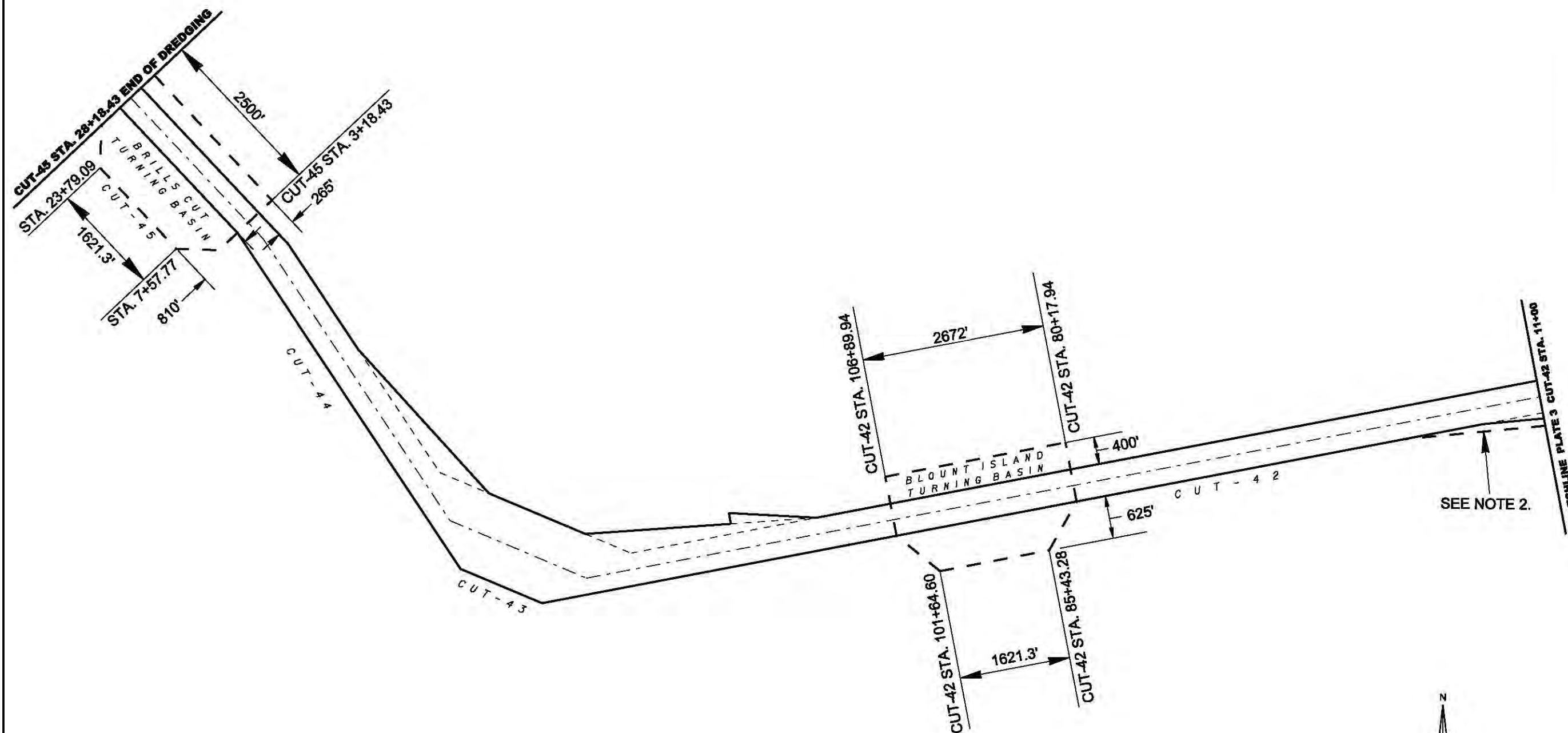
1. STATION AND RANGE VALUES ARE RELATIVE TO THE EXISTING PROJECT CONTROL.
2. SOUTH WIDENER EXPANSIONS FOR CUT-41 AND CUT-42 ARE THE SAME AS THE EXISTING 38' PROJECT WIDENERS

LEGEND:

EXISTING NAVIGATION PROJECT —————
 NAVIGATION PROJECT EXPANSION - - -

EXISTING CHANNEL WIDTHS

CUT-42 ENTIRE CUT = 475 FEET, PLUS SOUTH AND NORTH WIDENER
 CUT-43 ENTIRE CUT = 1175 FEET
 CUT-44 ENTIRE CUT = 525 FEET, PLUS NORTH WIDENER
 CUT-45 ENTIRE CUT = 425 FEET



NOTE:

1. STATION AND RANGE VALUES ARE RELATIVE TO THE EXISTING PROJECT CONTROL.
2. SOUTH WIDENER EXPANSION FOR CUT-42 IS THE SAME AS THE EXISTING 38' PROJECT WIDENER

LEGEND:

EXISTING NAVIGATION PROJECT —————
 NAVIGATION PROJECT EXPANSION - - - - -
 NEW PROJECT TURNING BASINS - - - - -

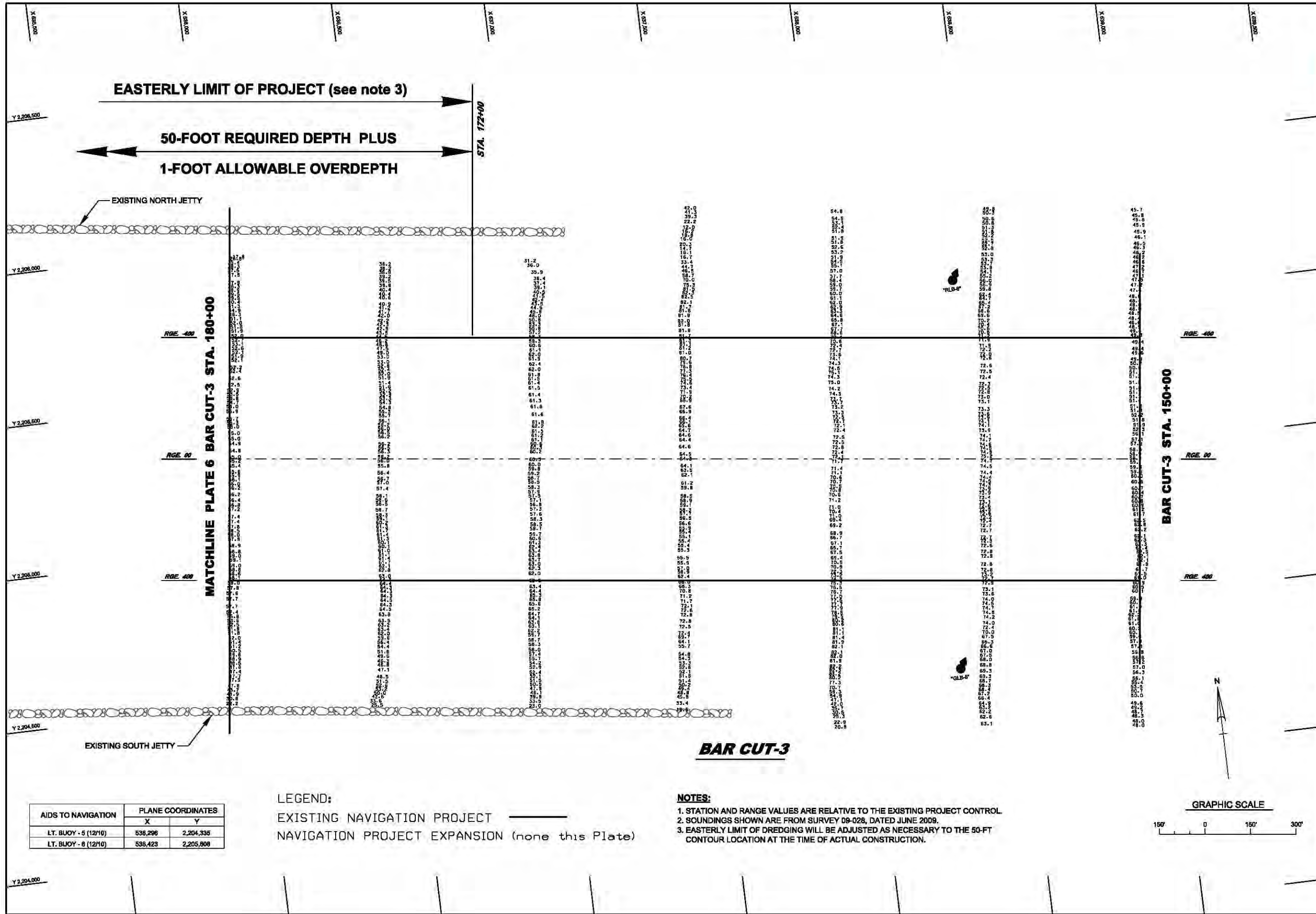


DEPARTMENT OF THE ARMY
 JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
 JACKSONVILLE, FLORIDA

File name: SRC
 Reference files: SRC
 Designed by: SRC
 Drawn by: LRP
 Scale: As Shown
 Plot scale: 1" = 400'
 Date: MARCH 2013

JACKSONVILLE HARBOR NAVIGATION PROJECT
 DUVAL COUNTY, FLORIDA
 EXISTING PROJECT AND PROPOSED EXPANSION DETAILS
 (CUT-42 STA. 11+00 TO CUT-45 STA. 28+18.43)
 GENERAL REEVALUATION REPORT II - ENGINEERING APPENDIX


PLATE
 4



AIDS TO NAVIGATION	PLANE COORDINATES	
	X	Y
LT. BUOY - 5 (12/10)	538,296	2,204,335
LT. BUOY - 6 (12/10)	538,423	2,205,608

LEGEND:
EXISTING NAVIGATION PROJECT ———
NAVIGATION PROJECT EXPANSION (none this Plate)

NOTES:
1. STATION AND RANGE VALUES ARE RELATIVE TO THE EXISTING PROJECT CONTROL.
2. SOUNDINGS SHOWN ARE FROM SURVEY 09-028, DATED JUNE 2009.
3. EASTERLY LIMIT OF DREDGING WILL BE ADJUSTED AS NECESSARY TO THE 50-FT CONTOUR LOCATION AT THE TIME OF ACTUAL CONSTRUCTION.



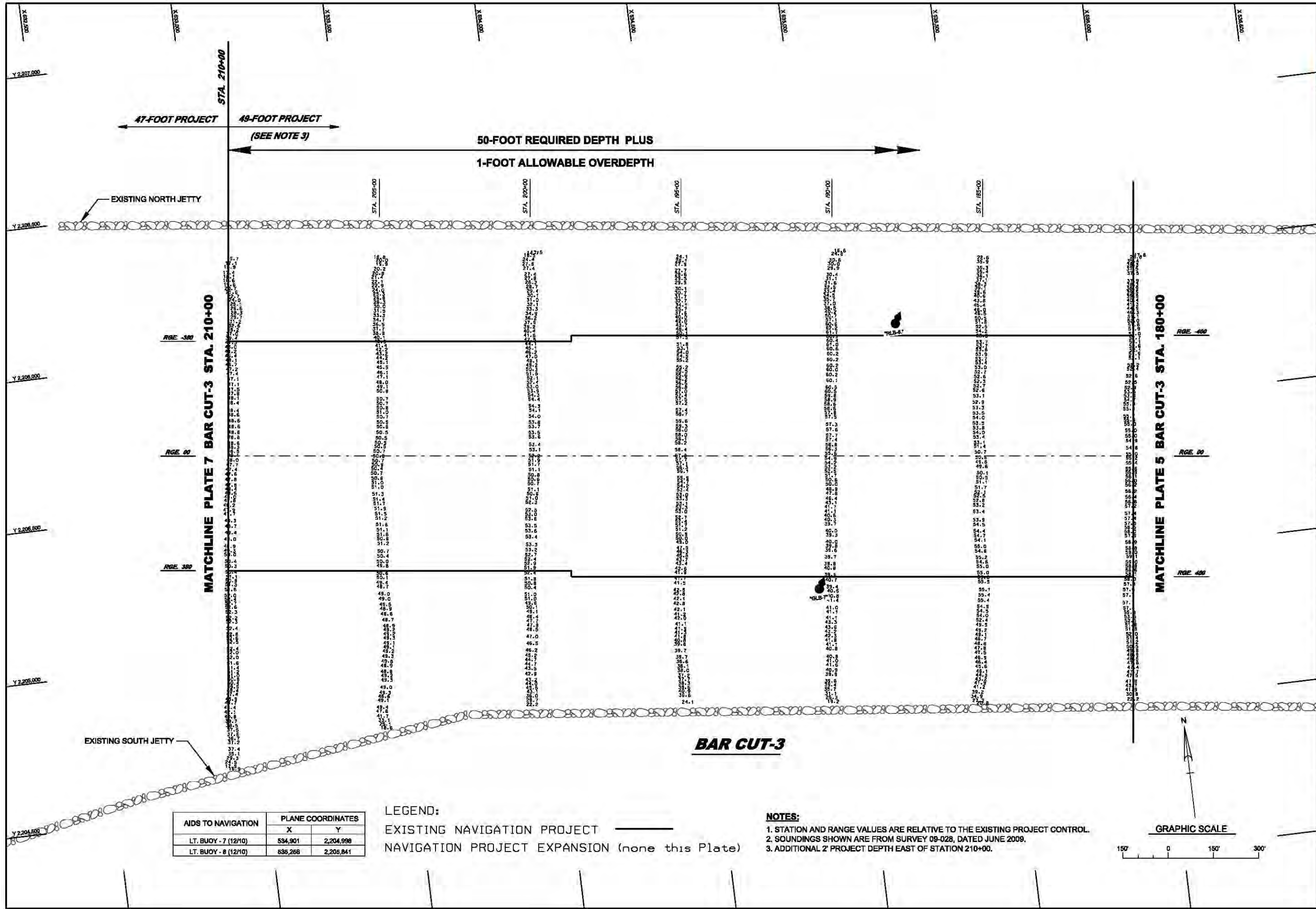
US Army Corps
of Engineers
Jacksonville District

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

File name:
Scale As Shown
Plot date:
Designed by:
SRC
Drawn by:
SRC
Checked by:
LRP
Dated: MARCH 2013

JACKSONVILLE HARBOR NAVIGATION PROJECT
DUVAL COUNTY, FLORIDA
TENTATIVELY SELECTED PLAN
49' PROJECT DEPTH (BAR CUT-3 STA. 150+00 TO 180+00)
GENERAL REEVALUATION REPORT II - ENGINEERING APPENDIX

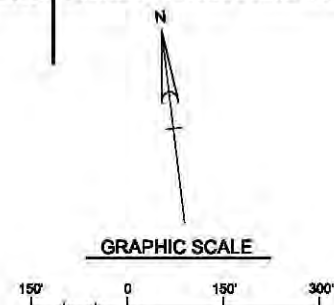
PLATE
5

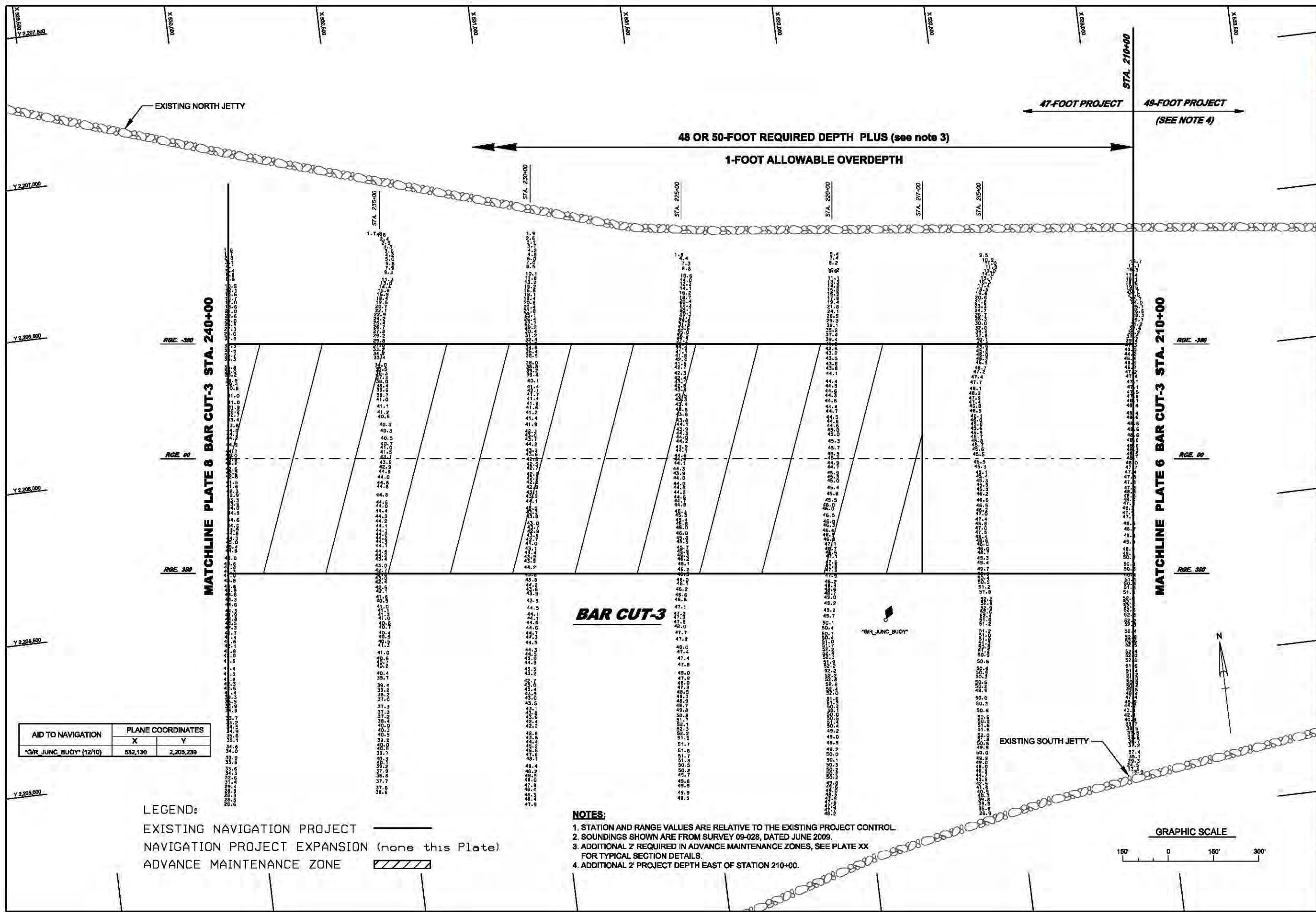


AIDS TO NAVIGATION	PLANE COORDINATES	
	X	Y
LT. BUOY - 7 (12/10)	534,901	2,204,998
LT. BUOY - 8 (12/10)	535,266	2,205,841

LEGEND:
EXISTING NAVIGATION PROJECT
NAVIGATION PROJECT EXPANSION (none this Plate)

NOTES:
1. STATION AND RANGE VALUES ARE RELATIVE TO THE EXISTING PROJECT CONTROL.
2. SOUNDINGS SHOWN ARE FROM SURVEY 09-028, DATED JUNE 2009.
3. ADDITIONAL 2' PROJECT DEPTH EAST OF STATION 210+00.

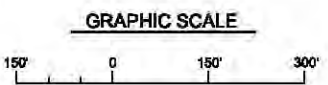




AID TO NAVIGATION	PLANE COORDINATES	
	X	Y
"GR JUNC BUOY" (12/10)	532,130	2,205,239

LEGEND:
EXISTING NAVIGATION PROJECT
NAVIGATION PROJECT EXPANSION (none this Plate)
ADVANCE MAINTENANCE ZONE

- NOTES:
1. STATION AND RANGE VALUES ARE RELATIVE TO THE EXISTING PROJECT CONTROL.
2. SOUNDINGS SHOWN ARE FROM SURVEY 09-028, DATED JUNE 2009.
3. ADDITIONAL 2' REQUIRED IN ADVANCE MAINTENANCE ZONES, SEE PLATE XX FOR TYPICAL SECTION DETAILS.
4. ADDITIONAL 2' PROJECT DEPTH EAST OF STATION 210+00.



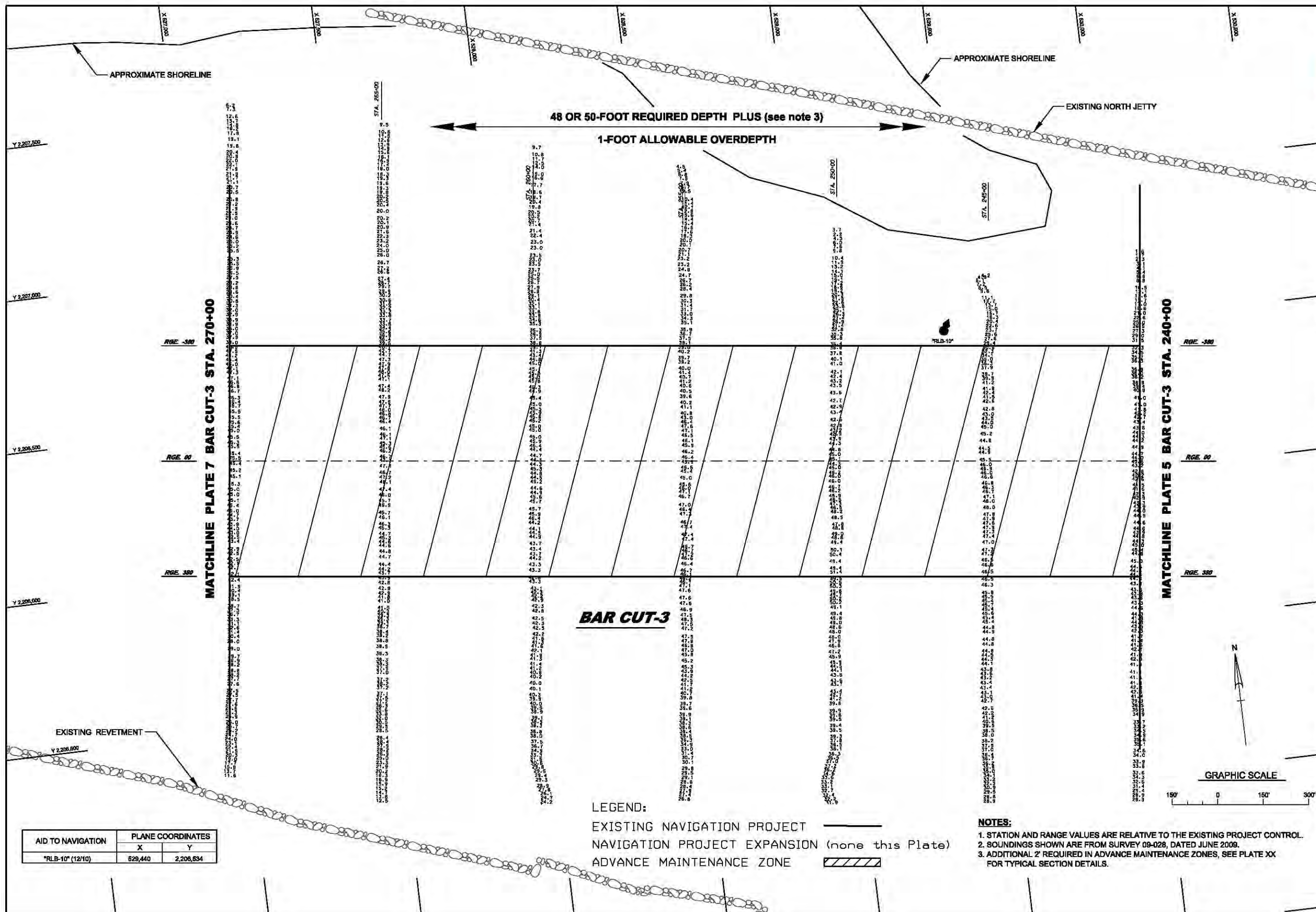
JACKSONVILLE HARBOR NAVIGATION PROJECT
DUVAL COUNTY, FLORIDA
TENTATIVELY SELECTED PLAN
47- PROJECT DEPTH (BAR CUT-3 STA. 210+00 TO 240+00)
GENERAL REEVALUATION REPORT II - ENGINEERING APPENDIX

FILE NAME: SRC
DESIGNED BY: SRC
DRAWN BY: SRC
CHECKED BY: LRP
DATE: MARCH 2013

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

US Army Corps of Engineers
Jacksonville District

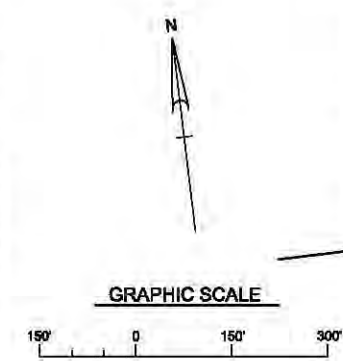
PLATE
7




AID TO NAVIGATION	PLANE COORDINATES	
	X	Y
"RLB-10" (12/10)	529,440	2,206,634

LEGEND:
EXISTING NAVIGATION PROJECT ———
NAVIGATION PROJECT EXPANSION (none this Plate)
ADVANCE MAINTENANCE ZONE [Hatched Box]

NOTES:
1. STATION AND RANGE VALUES ARE RELATIVE TO THE EXISTING PROJECT CONTROL.
2. SOUNDINGS SHOWN ARE FROM SURVEY 09-028, DATED JUNE 2009.
3. ADDITIONAL 2' REQUIRED IN ADVANCE MAINTENANCE ZONES, SEE PLATE XX FOR TYPICAL SECTION DETAILS.





US Army Corps
of Engineers
Jacksonville District

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

File name:
SRC

Designed by:
SRC

Scale As Shown
Plot date:
Plot scale:

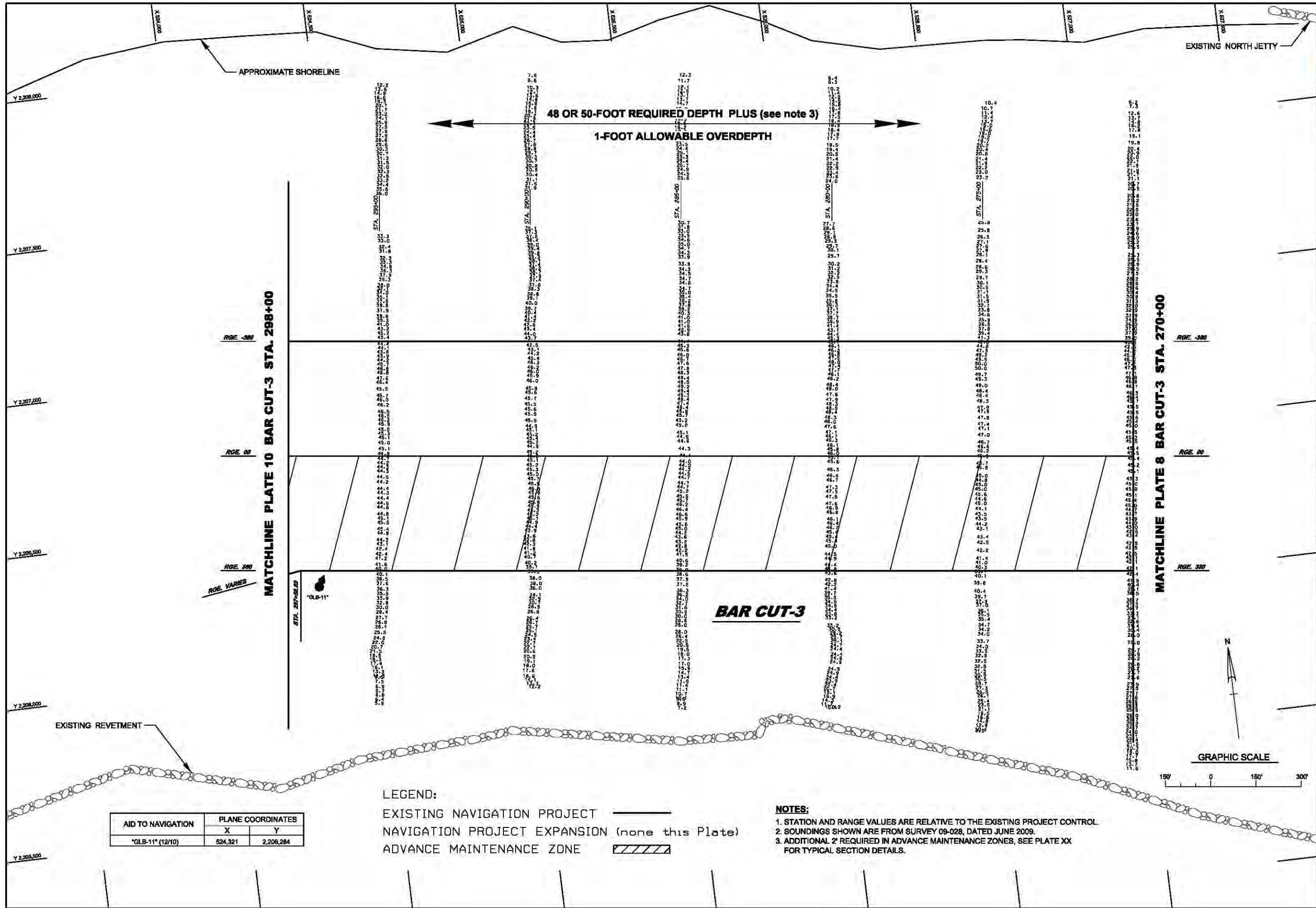
Dwn by:
SRC


Dtd by:
LRP

Dated: MARCH 2013

JACKSONVILLE HARBOR NAVIGATION PROJECT
DUVAL COUNTY, FLORIDA
TENTATIVELY SELECTED PLAN
47- PROJECT DEPTH BAR CUT-3 STA. 240+00 TO 270+00
GENERAL REEVALUATION REPORT II - ENGINEERING APPENDIX

PLATE
8





US Army Corps
of Engineers

Jacksonville District

DEPARTMENT OF THE ARMY

JACKSONVILLE DISTRICT, CORPS OF ENGINEERS

JACKSONVILLE, FLORIDA

File name:

Scale: As Shown

Plot date:

Plot scale:

Designed by:

Drawn by:

Checked by:

Reviewed by:

Reference files:

LRP

LRP

LRP

DATE: MARCH 2013

JACKSONVILLE HARBOR NAVIGATION PROJECT

DUVAL COUNTY, FLORIDA

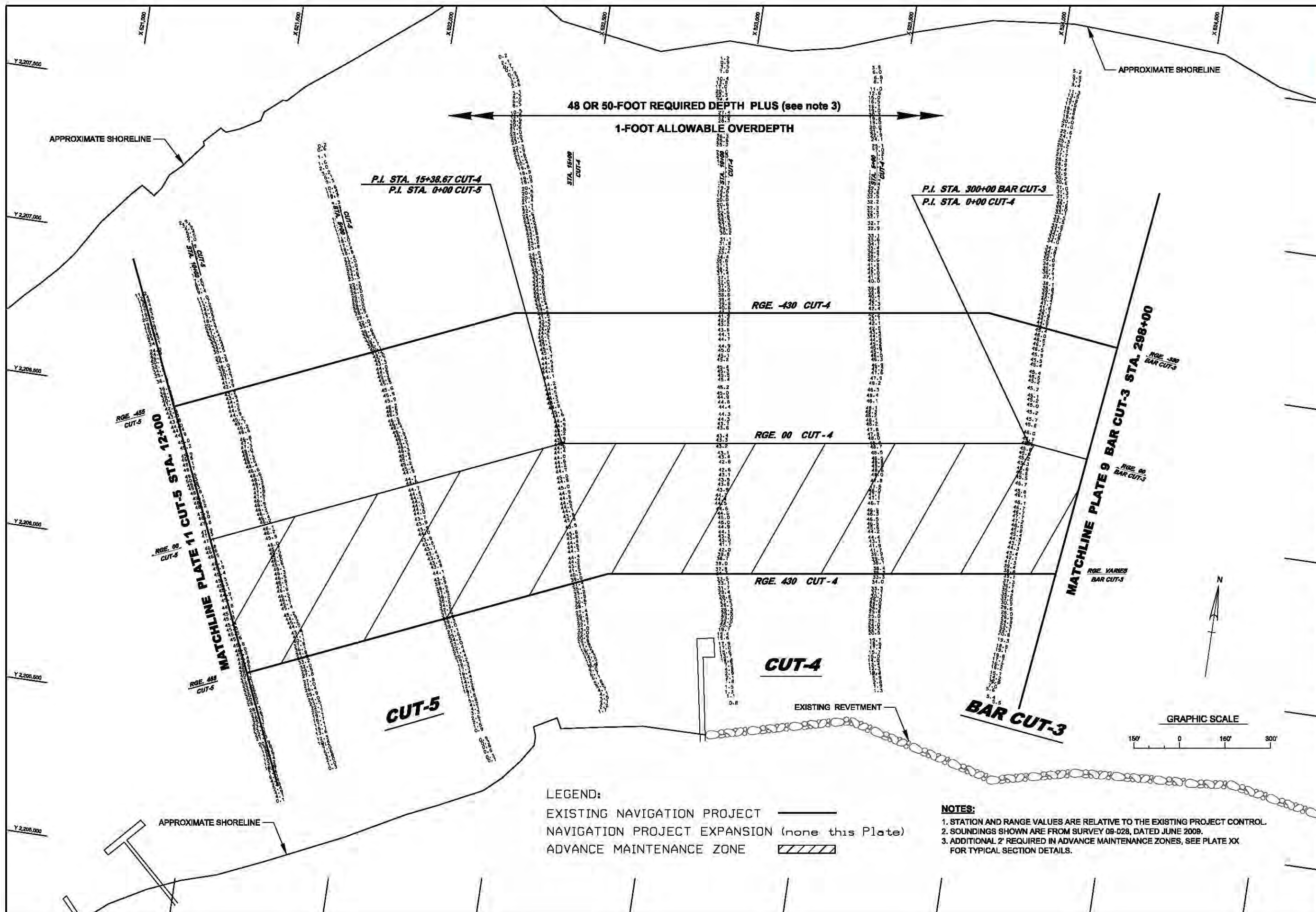
TENTATIVELY SELECTED PLAN

47- PROJECT DEPTH BAR CUT-3 STA. 270+00 TO 298+00

GENERAL REEVALUATION REPORT II - ENGINEERING APPENDIX

PLATE

9



LEGEND:
EXISTING NAVIGATION PROJECT ———
NAVIGATION PROJECT EXPANSION (none this Plate)
ADVANCE MAINTENANCE ZONE

NOTES:
1. STATION AND RANGE VALUES ARE RELATIVE TO THE EXISTING PROJECT CONTROL.
2. SOUNDINGS SHOWN ARE FROM SURVEY 08-028, DATED JUNE 2008.
3. ADDITIONAL 2' REQUIRED IN ADVANCE MAINTENANCE ZONES, SEE PLATE XX FOR TYPICAL SECTION DETAILS.

DEPARTMENT OF THE ARMY JACKSONVILLE DISTRICT, CORPS OF ENGINEERS JACKSONVILLE, FLORIDA	
File name: Reference files	Designed by: SRC Drawn by: SRC Dated: MARCH 2013
JACKSONVILLE HARBOR NAVIGATION PROJECT DUVAL COUNTY, FLORIDA TENTATIVELY SELECTED PLAN 47* PROJECT DEPTH (BAR CUT-3 STA. 298+00 TO CUT-5 STA. 12+00) GENERAL REEVALUATION REPORT II - ENGINEERING APPENDIX	
PLATE 10	